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ABSTRACT

This paper presents arguments for subsidizing developmental day care (preschool intervention) programs, which have as their goal helping children function competently in society and which include some types of assistance to the children's families. The growing need for day care and the inability of many families to pay for it, both in Texas and in the rest of the country, are pointed out. An extensive review of research identifies benefits to participating children and families, commonalities among effective preschool programs, and monetary savings or revenues generated by such programs which offset the costs of day care. The topics of research examined include the likelihood of harmful effects from out-of-home care; the intellect of children in day care, school performance, socialization, and health; family benefits; community changes, program specific factors, and economic factors. An analysis of the research reveals that young children who participate in developmental day care can develop as competently as their home-reared peers. In addition, programs with the intervention potential of developmental day care can result in substantial monetary savings and in fact generate revenue. The implications discussed include the social reality and necessity of day care, the need for more unity and organization in the provision of day care, the program characteristics important to effective day care, and the need for more subsidized day care for low-income families. It is concluded that developmental day care is cost effective, beneficial to children and families, and necessary. (Author/JA)

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DEVELOPMENTAL DAY CARE:

IT'S VALUE AND COST BENEFITS

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Developmental Day Care:

It's Value and Cost Benefits

The Problem

There is a growing demand for day care. In 1979 almost 42 percent of the mothers of preschool children and well over half of the mothers of school age children were employed (Hoffman, 1979). The trend is expected to be toward increasing percentages of employed mothers throughout the next decade. Most mothers are working because her family needs the money and the income is important for her family. A survey of working mothers in Texas found that 84 percent were working out of economic necessity (Texas Department of Community Affairs, 1978). "Women are working for reasons similar to men's and that involves income." (Keniston, 1979).

The price for a month of developmental day care is substantial. Depending on the child's age, quality of the program and expenses incurred by the day care provider, day care ranges from $130 to $308 a month in Texas.*

Family budgeting guidelines indicate that families generally cannot afford to pay more than 10 percent of their gross income for child care. (Note 1). This brings the problem of the cost of day care sharply into focus. One in five children in Texas (Texas Department of Community Affairs, 1978) and one in six in the United States live in poverty (Smith, 1980). For families with low income or several children, 10 percent of their income clearly is not enough to pay for developmental day care. In many instances it is not enough to even buy poor quality day care--a factor reflected in the existence of an

*Lower amount based on center's newspaper advertising and telephone calls to centers. Higher amount is the maximum paid by the Texas Department of Human Resources for non-handicapped children as stated in revision 80-52 of the agency's Social Services Handbook.

estimated 30,000 Texas preschool children who are left without adult supervision while their parents work (Texas Department of Community Affairs, 1978).

The combination of a growing need for day care and the inability of many families to pay for it means that some of the funds for day care need to come from sources other than the families. Possible sources include federal, state and local governments, private companies, service groups and United Fund. However, the willingness of taxpayers, employers, benevolences, etc. to invest in services is frequently tied to how the service benefits society and whether its cost is offset by savings and generated revenue. Therefore, the problem addressed in this paper will be what arguments can be made for subsidizing developmental day care for families.

Questions

There are a number of questions regarding the human and monetary benefits that are possible from effective day care. This paper will attempt to address the following:

- What aspects of preschool intervention and development day care programs have been studied?
- What positive outcomes has research identified in participating children and their families?
- Are any of the costs of day care offset through savings or generated revenues?
- What are the commonalities among the effective preschool programs?

Method

A search for pertinent research studies that detailed the effects of preschool programs, especially day care was made. Government publications, ERIC and miscellaneous bibliographies were used to identify research studies

and related literature for review. The studies were reviewed, analyzed, benefits (if any) identified, and characteristics of the programs with positive outcomes compared to identify common elements. In the instance of monetary savings or generated revenues, both literature and personal contacts were used to collect pertinent fiscal data.

Review of Research

The review of literature cites studies of both early childhood education programs and developmental day care (preschool intervention programs). This is because nearly all of these programs characteristics can be and often are incorporated into developmental day care. Goals for all the programs reviewed were to help children function competently in society, including some types of assistance to the children's families.

Scope of Research

The majority of the studies on the effects of day care and other early childhood programs seem to have focused on two concerns. One concern was whether out-of-the-home care is harmful and in particular whether it has a negative effect on the attachment between the mother and child. The other concern was whether children's participation in preschool programs results in intellectual gain and/or improved school performance (Peters and Benn, 1980).

The preoccupation with measuring intellectual gains in the early childhood programs of the 1960's and early 1970's (even programs with broad goals for children and families) has resulted in heavy criticism from Zigler (1978, and 1979, Note 3), Smith (1980), Peters and Benn (1980), and others. Actually, a few other aspects such as the attitudes and values of program participants and their parents and children's socializations were studied (Bronfenbrenner,

1974; Lazar and Darlington, 1979; Westinghouse Learning Corporation and Ohio University, 1969; Note 2). There were also scattered studies on health benefits, parent involvement, community changes, the day care environment and economic factors (Begley and Liston, 1975; Liston and Van de Ven, 1976; Mann, Harrell and Hurt, 1976; Roupp, Travers, Glantz and Coelen, 1979; Rubenstein and Howes, 1979). Considering the broad goals of the intervention and day care programs such as Head Start, it seems surprising that the research did not include more studies on the impact of early childhood programs regarding:

- o children's social development;
- o parent/child relationships;
- o changes in community institutions and parents involvement with them;
- o children's health; and
- o economic factors.

Out-of-Home Care

The research related to the harmful effects of out-of-home care have generally found none when studying adequate providers (Peters and Benn, 1980) although inadequate facilities have been discovered exploiting, abusing, neglecting or otherwise maltreating children (Belsky and Steinberg, 1979). Delatener and Cadden (1979) quote Jerome Kagan as indicating that based on his work with an "ideal" nursery, there is no objective evidence to indicate that day care harms a child cared for by a conscientious, nurturing caregiver.

In 1978 Belsky and Steinberg reported on an extensive review of research regarding the effects of high quality day care. In their review they concluded that day care has "neither salutory nor adverse effects" for most children. The only contradictory evidence they found was Blehar's (1974) research with two-and-three-year-old children which indicated that day care fostered anxious

and ambivalent attachment of children to their mothers and (2) that one population of children (the economically disadvantaged) may benefit from day care.

Although Belsky and Steinberg reviewed other research studies similar to Blehar's, they cite it as the only one to show a substantial, systematic difference in attachment between the general populations of day care and home-reared children. They cite the possibility that Blehar's experiment may have been biased by the experimenters and coders being aware of her hypothesis (Belsky and Steinberg, 1979).

Intellect and School Performance

In regards to economically disadvantaged children, Belsky and Steinberg, (1978) stated that day care appears to "attenuate declines in test scores typically associated with high-risk populations after 18 months of age." This conclusion of Belsky and Steinberg regarding high-risk children is supported by findings from the research and evaluation of a number of early childhood education projects including developmental day care (Beller, 1974; Butler, 1970; Bronfenbrenner, 1974; Comptroller General, 1979; Gordon, 1975; Gray and Klaus, 1970; Lazar and Darlington, 1979; Lazar, Hubbell, Murray, Rosche and Royce, 1977; Mann et al, 1976; Ryan, 1974; Westinghouse et al, 1969).

Children participating in various early childhood education projects exhibited gains in IQ scores at the end of one year on such measures as the Stanford Binet, Peabody Picture Vocabulary Test (PPVT), Preschool Inventory (PSI) and the Metropolitan Achievement Test (Bronfenbrenner, 1974; Lazar and Darlington, 1979; Ryan, 1974). These gains were maintained for the duration of the children's participation in the programs (Bronfenbrenner, 1974, Comptroller General, 1979).

The attenuation of decline or increase in IQ scores for economically disadvantaged children began to fade when the children's participation in the early childhood education programs ended (Bronfenbrenner, 1974; Lazar and Darlington, 1979; Westinghouse et al, 1969).

However, in most instances, the IQ scores remained significantly changed for two to four years after completion of the programs (Comptroller General, 1979; Day Care and Child Development Reports, 1981; Gordon, 1975, Lazar and Darlington, 1979; Ryan, 1974). Some data suggests that these declines can be offset by continuation of the developmental support into the early grades (Bronfenbrenner, 1974). Actually, these declines may be more of an indictment of schools than of the early childhood programs (Zigler, 1978).

Longitudinal research has found that although the impact on test scores faded, the children's participation had significant impact on their schooling. The children who participated in the preschool intervention programs required special education less often than matched controls (Comptroller General, 1979; DCCD Reports, 1981; Lazar and Darlington, 1979; Lazar et al, 1977, Note 2). Four projects reduced the number of children assigned to special education by more than 50 percent (Lazar et al, 1977). In one project, the high risk (educably mentally retarded) participants were not assigned to special education significantly more often than the general school population (Wolman in Lazar et al, 1977).

Not only were the children who participated in the preschool intervention programs placed in special education less often, they were retained-in-grade less often (Abelson, 1974; Comptroller General, 1979; DCCD Reports, 1981; Herzog, Newcomb and Cisin, 1974; Lazar and Darlington, 1979; Lazar et al, 1977; Wekart, Deloria and Lawsor, 1974). In one project, the high-risk children

were not held back any more often than the general population. Interestingly, in this project only 32.8 percent of Spanish surnamed high-risk population were retained-in-grade as compared with 62.9 percent of the Spanish surnamed children in the school's general population (Woolman in Lazar et al, 1977).

Another school-related benefit from participation in high-quality preschool programs was found which seems to be a logical outcome of improved school-work and less retention in grade. Children who attended high quality preschool programs have a higher completion rate for high school and a greater probability of attending college. (Comptroller General, 1979; DCCD Reports, 1981; Lazar and Darlington, 1979).

Socialization

One of the best known studies which measured socialization, as well as cognitive gains, was the Westinghouse study (1969). Across all the programs studied on for this report, there was not a significant difference in the Head Start and control children regarding social development. The socialization was studied in school-related situations, relied heavily on teacher evaluations and results varied among the different locations.

Since the Westinghouse study in 1969, several studies have found that Head Start, developmental day care and similar early childhood education programs do positively contribute to the children's development of socially mature behavior and do facilitate socialization (Belsky and Steinberg, 1974; Kirschenbaum, 1979; Lazar and Darlington, 1979; Mann et al, 1976; Peter and Benn, 1980; Rubenstein and Howes, 1979; Ryan, 1974). Children who participated in the high quality day care and early childhood education programs showed less tendency toward delinquent and antisocial behavior in and out of school (Comptroller General, 1979; DCCD Reports, 1981; Lazar and Darlington, 1979).

Family Benefits

The benefits of the early childhood education programs were not limited to the children who attended them. Their families were impacted as the parents were involved and assisted.

The day care programs provided child care during working hours which allowed parents to become employed. This employment resulted in increased family income and the parents' greater self-esteem and satisfaction (Begley and Liston, 1975; Freis and Miller, 1980; Hoffman, 1979; Liston and Van de Ven, 1976).

Parents liked the programs and were satisfied with their children's educational gains (Comptroller General, 1979; Lazar and Darlington, 1979; Mann et al, 1976; Moore, 1978; Zigler, 1978). As a result of their participation with their children in the programs they improved their parenting skills (Bronfenbrenner, 1974; Comptroller General, 1979; Gordon, 1975; Mann et al, 1976). In particular, parents improved their ability to interact and communicate verbally with their children (Gray, 1974; Mann et al, 1976). Younger siblings of the participating children also benefitted from the parents' improved skills (Bronfenbrenner, 1974; Gray, 1974).

Children's Health

Programs with health assessment/follow-up and nutrition components had a positive impact on children's health. Participation resulted in the children having less anemia, more immunizations, early identification of potential disabling conditions and better general health. (Comptroller General, 1979; Liston and Van de Ven, 1976; Mann et al, 1976).

Community Changes

Preschool intervention programs have changed the communities that they have served (Liston and Van de Ven, 1976; Mann et al, 1976). The communities have become more aware of the needs of the poor. This awareness has both been a result of and resulted in involvement of the poor in decision-making roles (Mann et al, 1976).

More local persons have become employed which increased the economic health of the communities by increased production and sale of goods and services (Begley and Liston, 1975, Freis and Miller, 1980; Van de Ven, 1976). Included in the increased employment was the growth of paraprofessional occupations (Mann et al, 1976). Governmental units also benefitted from the increased payments of various taxes as a result of increased incomes (Begley and Liston, 1975; Freis and Miller, 1980; Liston and Van de Ven, 1976).

Another related benefit was that the visibility of the programs often brought together a variety of agencies to focus on children and families' needs (Mann et al, 1976).

Program Specific Factors

There are indications that the effects of early childhood education and day care may be program specific (Belsky and Steinberg, 1978; Butler, 1970; Foshay, 1980; Kirschenbaum, 1979; Peters and Benn, 1980; Roupp et al, 1979) Even in the Westinghouse study (1969) there were differences in findings among the programs. According to Winnet, Fuchs and Moffatt (Belsky and Steinberg, 1978), programs within legal guidelines vary in quality and this contributes to the problems of identifying significant findings across programs. The common differences they cited were caregiver-child ratio and interactions, staff experience, personnel turnover ratio and physical plant.

Some of the ways in which programs vary were addressed in the National Day Care Study (Roupp et al, 1979). In the study, three characteristics were found to be consistently associated with quality day care. These were (1) the group size, (2) the caregiver/child ratio, and (3) the proportion of caregivers with child-related education and/or training.

When compared to larger groups (24-28 children) with the same caregiver ratios, children in smaller groups (Roupp et al, 1979):

- Showed less hostility;
- Entered fewer conflicts;
- Were more continuously involved in tasks and activities;
- Were more cooperative; and
- Showed more verbal initiative and reflective/innovative behavior

The children in smaller groups also made greater gains on the PSI and PPVT.

The teachers in classes with higher ratios of teachers interacted more positively with the children than those in groups with more children per caregiver. They also spent more time on center-related activities and interacting with other adults (Roupp et al, 1979).

The teachers with child-related education or training spent more time in social interaction with children. The children in their care were more involved in tasks and activities and made greater gains on the PSI (Roupp et al, 1979).

High caregiver turnover may also contribute to the lack of positive outcomes from participation in developmental programs. Fowler and Khan (Belsky and Steinberg, 1978) found indications that high caregiver turnover was associated with a sudden decline in infant's IQ scores.

The amount of openness, flexibility and mobility in the center environment affects how well children function in it (Prescott, 1975). According

to her study, some children do not adapt readily to group care (non-thrivers) and the more restrictive and structured the environment, the more difficulty they have. By adapting the environment for the non-thrivers, the quality of care was improved for all the children in the program.

Economic Factors

The savings and revenue generated by developmental day care and early childhood programs have been studied from long-term and short-term perspectives. The long-term perspective is based on the difference between program participants and their matched controls found in longitudinal studies of their school performance, social behavior and employment status. The staff, parent and community related benefits is the basis of the short-term.

As discussed under intellect and school performance, early childhood program participants needed special education less often, were retained in grade less and were more likely to complete high school, be employed and go to college (Bronfenbrenner, 1974; Mann et al, 1976; Lazar and Darlington, 1979; Note 2). In a longitudinal study of the Perry Preschool Program (a high quality nursery school), Schweinhart and Weikart (Note 2) estimated the economic impact of some of these factors. For example, savings on special education were calculated by applying the difference between the percentage of controls and percentage of program participants needing special education. Based on 58 participants, they found that the savings in educational costs were more than sufficient to cover the original investment for one year of preschool and would cover 56 percent of the investment for two years.

The reduction of long-term dependency, which correlates with participation in high quality early childhood programs, potentially represents large monetary savings for local, state and federal governments. In 1976, the United States

Department of Labor found a direct relationship between poor school achievement and the rate of unemployment and its accompanying dependency on welfare for support (Comptroller General, 1979). Improved school achievement probably accounts for the longitudinal studies finding that a greater number of preschool participants (when compared to controls) were employed (DCCD Reports, 1981; Note 2). The projected savings that would result from the increased employment level of the Perry Preschool participants was calculated by Schweinhart and Weikart (Note 2) to be "greater than ninefold" when compared to one year of the program's operation.

Participation in early childhood programs has been associated with lowered levels of antisocial and delinquent behavior (Comptroller General, 1979; DCCD Reprots, 1981; Lazar and Darlington, 1979). In a comparison of a group of 15-year-olds reared in high crime areas, only 36 percent of those who attended a quality preschool were chronic offenders versus 52 percent of those who had not attended (DCCD Report, 1981). Poor school performance has been linked to delinquency and this may explain the difference between the rate for early childhood program participants and non-participants. The report by the United States Comptroller General's Office (1979), also suggests that improved family functioning (parent-child relationships, more income, etc.) is probably part of the explanation. In Texas during 1977, there were 102,739 arrests of children under 18-years-old and 44 percent of the 71,416 referrals to Texas juvenile courts were for conduct indicating a need for supervision. Vandalism in schools costs 500 million dollars a year and up to $13.50 per student in some Texas school districts (Texas Department of Community Affairs, 1978). In 1975, the U.S. News and World Report estimated that the annual cost of crime in this country to be 86.5 billion dollars. They estimated juvenile crime at 16 billion dollars and the cost of keeping a criminal in prison at from

$12,000 to $15,000 per year (Comptroller General, 197[illegible]. At these costs, even a small difference in the number of chronic offenders can result in large savings.

Federal, state and local governments spend billions of dollars annually on rehabilitation and related assistance (Comptroller General, 1979). The health services associated with preschool programs (EPSDT referrals, health assessments, vision and hearing screening, referrals for followup, etc.) have relieved mental and physical suffering, avoided the higher treatment cost associated with further deterioration and prevented future income loss (Begley and Liston, 1975; Liston and Van de Ven, 1976). The ratio of expenditures to long-term savings in the Texas early childhood projects was nine dollars ($9.00) for each dollar ($1.00) of state expenditure (Liston and Van de Ven, 1976).

The most certain and tangible cost benefits from day care are not related to the participating children. These savings and generated revenues result from day care being a labor intensive service and from it enabling parents to become employed. Begley and Liston (1975) did a study of programs aimed at preschool children (mostly day care) sponsored by the Texas Department of Community Affairs with state general revenue funds and the Texas Department of Human Resources* with federal Title IVA funds. During a nine month period, the incomes of families participating in these programs rose an average of $1.86 for each $1.00 of state money expended. These state sponsored programs served 985 families with 1,427 children. All of these were poverty families, but not all were receiving welfare at the time they entered the program. Of these receiving grants, 138 families got off welfare as a result of participation in the program. When the savings for the state's portion of the AFDC and Medicaid payments were combined with the additional sales tax revenue generated,

*The Department of Public Welfare in 1975.

48 cents were returned to the state for each dollar it expended.

Freis and Miller (1980) did a similar analysis of the impact of child care and development services funded by the California Department of Education. They studied the economic impact of child care services for 295 families who used child care services for over six months during a period of two and a half years. Of the 31 families who were on welfare when they entered the program 68 percent went off welfare and nearly all of the remainder received smaller grants. This reduced the welfare cost by almost half, from an annual rate of $165,100 to $87,736. Income and sales tax revenues from participating families were increased by 63 percent and the families increased the amount they paid in fees by 65 percent. Of the total public funding for the service, 44.5 cents of each dollar was offset by savings or generated revenue.

Another interesting factor identified in the California study (Freis and Miller, 1980) was that the average monthly income and taxes per family increased in almost direct proportion to the length of time in the program. Income increases for families staying in the program over two years were six and one half times the income increases for those of families who stayed only six months.

Analysis of Research

All the research studies cited above seem to have been conducted carefully and systematically in keeping with accepted research practices. The longitudinal studies (Bronfenbrenner, 1974; Lazar and Darlington, 1979; Lazar et al, 1977; Note 2) were especially careful to factor out such extraneous variables as sex of child, ethnic background, family size and mother's educational levels. Only projects with carefully selected and assigned controls and parallel data were included. Stringent tests of

significance were also used in the comparisons.

Young children who participate in developmental day care can develop as competently as their home-reared peers (Belsky and Steinberg, 1978; Peters and Penn, 1980). In the case of economically disadvantaged children, those in development day care are likely to develop more competently than their home-reared peers (Bronfenbrenner, 1974; Belsky and Steinberg, 1978; Lazar and Darlington, 1979; Note 2). For many economically disadvantaged children the ecology of the home situations is such that the destructive forces even cause declines in cognitive development and wipe out gains from participation in early childhood programs (Bronfenbrenner, 1974). Considering these probabilities, it seems plausible that if the level nurturance and intellectual stimulation in day care is equivalent to the home-rearing situation of a child it will neither benefit nor harm that child. In this same line of reasoning, a program that offers more nurturance and intellectual stimulation than home situations will be beneficial to children. For low-income families, developmental day care helps by offering the child nurturance and stimulation and by enabling the family to secure more resources to improve the home situation.

The findings of Weikart (1979; Weikart, Deloria and Lawsor, 1974; Note 2) and United States Comptroller General's Office (1979) supported by the findings Mann et al. (1976, Lazar and Darlington (1979) and related studies, indicate that programs with the intervention potential of developmental day care can result in substantial long-term savings. The areas in which savings are possible are schooling cost (special education and grade retentions), health and rehabilitation cost, welfare cost, crime prevention and the cost of keeping criminals in prison.

Short-term savings and revenue generation are also possible according to Begley and Liston (1975), Liston and Van de Ven (1976), the United States

Comptroller General's Office (1979) and Freis and Miller (1980). These studies show that nearly half of the state subsidy for day care is returned to the state each year in savings on welfare payments and the tax revenue generated.

In the reports reviewed no mention was made about increases in social security (FICA) payments although Title XX funds were used by the California program (Freis and Miller, 1980) and Title IV-A funds by the Texas programs (Begley and Liston, 1975; Liston and Van de Ven, 1976). To calculate the FICA paid as a result of day care, the percentage of salary paid by employees and employers (currently 6.65 percent each) should be applied to the salaries of (1) the day care staff, (2) the working parents, and (3) others in the community whose employment is made possible by the ripple or "trickle-up" effect from the expenditure of the day care staff and parent salaries. Each dollar of the salaries generates about 7.5 dollars (Freis and Miller, 1980; Liston and Van de Ven, 1976) of manufactured goods, trade and services in the community through the ripple effect. Following this line of reasoning it is quite possible that more funds are paid into Social Security as a result of a day care center's operation than the cost of its operation (See Attachment B for a sample calculation).

Implications

Social Reality and Necessity

Day care has become a social reality (Peters and Benn, 1980) and there is a pressing need for affordable day care for families at all income levels (Note 1).

Day care is growing in America, but not fast enough to keep up with the need. The best served age group is children between three and six years old.

However, there are great differences in the distribution, quality and supply. The problem related to day care for infants and school age children in graphically described by Zigler and Hunsinger (1979):

> "Many communities have no suitable infant day care, despite the fact that the fastest growing proportion of working mothers is among those with children under two. Two-thirds of the care is needed for school-age children, yet most public and private programs served only preschool children. According to Bureau of Census statistics, there are nearly two million "latchkey" children who come home to an empty house each day. Who are these children? They include a seven-year-old boy who, while left alone was forced to hide in a closet when a burglar broke into his house. They include a 10-year-old girl who was recently accosted in her suburban apartment before her mother could return home from work."

The need for child care for children of teenage mothers so that the mothers can finish their education or receive vocational education is becoming critical, too. One in five children are born to teenage mothers and 36 percent of these are illegitimate (Smith, 1980; Texas Department of Community Affairs, 1978; Women's Bureau, 1977).

More Unity and Organization Needed

In Texas, as well as in this country as a whole, day care is provided in an unequal somewhat hit and miss fashion, often involving limited coordination with other early childhood programs. During the last ten years, day care in Texas has been subsidized by the Department of Human Resources (TDHR) with Title XX, WIN, Title IVA (income disregard) and general revenue funds, Texas Department of Community Affairs with general revenue funds, Head Start, migrant programs, Concentrated Employment and Training Act funds, cities, counties, school districts, United Way, churches and various other groups. Tax benefits were also available in the form of income tax credit to families for child care. Some of the efforts were joint, but even those were hampered by

differing goals, priorities, definitions of quality and requirements.

The mere mention of requirements is likely to open controversy. The standards set by States must strike a balance between the day care provider's right to operate and the child's right to safe, beneficial care. This means that the Minimum Standards (Texas Department of Human Resources, 1980) require day care facilities to provide only the basics. On the other hand, as a funding source, the federal government is concerned about maximum benefits for children and their families. However, the Federal Interagency Day Care Requirements (U.S. Department of Health, Education and Welfare, 1968) and The Health and Human Services Day Care Requirements (Federal Register, March 19, 1980) have resulted in a set of requirements that have labeled neither enforceable nor affordable given current funding constraints.

If day care is to fullfill its potential for cost benefits, the outcome sought must be competent children. To secure this outcome, efforts will have to focus on helping families become self-sufficient, on developing and maintaining quality child care and on linking community services. To accomplish this cost effective delivery methods must be identified, agreed upon and incorporated into programs according to the needs of the families and children each program serves. This will take the cooperative efforts of the early childhood education, child development, social work and day care professions.

Program Characteristics Matter

There are a number of preschool program/day care characteristics that correlate with children's development of the competencies (self-actualizations) that result in long-term monetary savings and revenue generation for themselves their families and their local, state and federal governments. Among these are:

(1) Programming that is structured toward meeting the assessed developmental needs of its participants (Butler, 1970; Bronfenfrenner, 1974; Deutsch, Taleporos and Victor, 1974; Gordon, 1975; Karnes, Zehrbach and Teska, 1974; Kirschenbaum, 1979; Lazar et al, 1977; Liston and Van de Ven, 1976; Prescott, 1975; Sprigle, 1974; U.S. Department of Health, Education and Welfare, 1969a, 1969b, 1969c, 1969d; Weikart, Deloria and Lawsor, 1974). A number of different curricula have been found successful within this framework.

(2) Consistent staff with specialized training related to working with young children in the form of either specialized degrees or pre-service and/or in-service training (Belsky and Steinberg, 1978; Roupp et al, 1979). This was a component of programs developed by Beller, Deutsch, Gordon, Gray, Karnes, Miller, Levenstein, Palmer, Weikart, Woolman and Zigler (Herzog, et al, 1974; Lazar, et al, 1977) and one of the items the Abt study (Roupp et al, 1979) found to definitely affect children's competency.

(3) Small group sizes and accompanying relatively small ratios of children to caregivers (Roupp et al, 1979). These allow for consistent interaction among children and between children and caregivers. In the study of programs with long-term effects the groups were small and the ratios caregivers to children high. In the 3 to 5 year old groups, the largest group was 25 children and the lowest ratio of caregivers to children was 1 to 12.5 children with one professional teacher (American Institute of Research, 1970a, 1970b; Lazar et al, 1977; U.S. Department of Health, Education and Welfare, 1969a, 1969b, 1969c, 1969d).

(4) A flexible environment that has activities supported with materials and equipment to stimulate children's interest and participation

in developmental activities (Gray, 1974; Gordon, 1975; Karnes et al, 1974; Prescott, 1975; Schlecter and Salkind, 1979; Sprigle, 1974; Weikart et al, 1974).

(5) Involvement of the parents as valued members of the child care team (American Institute of Research, 1970a; Bronfenbrenner, 1974; U.S. Department of Health, Education and Welfare, 1969a, 1969b, 1969c, 1969d; Westinghouse et al, 1969).

(6) Health and nutrition components (Mann et al, 1976; Liston and Van de Ven, 1976; Comptroller General, 1979).

(7) Linkage to other community services (Mann et al, 1976; Liston and Van de Ven, 1976; Freis and Miller, 1980).

The curricula to which these apply need to concentrate on four basics (Foshay, 1980):

1. Coping skills. Children must develop the array of skills and information required for them to deal with themselves and their world.
2. Character. Children must be helped by precept, example and practice to develop self-direction, dependability, honest dealings, and a clear sense of justice.
3. Citizenship. Children need to be involved in a process that imparts knowledge and offers direct practice in feeling an affiliation with their nation and a brotherhood with all humanity.
4. Private realization. Children need to develop a personal sense of worth apart from the opinions of others.

Since working mothers have less time to spend with their children to instill the knowledge and values they would like their children to have (Hawenstein and Beehar, 1979) it is more important that the above characteristics and curriculum basics be included in day care than in other early childhood

education programs. According to Shane (1980), "Purely custodial day care merely clogs early childhood education arteries without carrying much enrichment to young learners." Children and their families deserve more than this especially from a service with such high cost benefits.

Low-Income Families Need Subsidized Day Care

It is easy to look at the numerous sources subsidizing day care and conclude that with all these sources there must be enough subsidy. However, this is not true. For example, in Texas a generous estimate of the percentage of poor children whose day care needs are met would be 25 percent. Head Start serves only 15 percent of those eligible (Texas Department of Community Affairs). About 6 percent of those eligible for Title XX day care receive it based on the Texas Department of Human Resources (1980) standard planning data. All the other programs combined serve less than the Title XX program. Some states serve higher percentages and others even fewer.

According to the Texas Department of Community Affairs (1978), there are 900,000 children with working mothers in Texas and at least one in five of these is poor. The Department of Human Resources (1980), estimated the number at 1,331,400 with between 250,000 and 310,000 having working mothers and families with incomes at or below 52 percent of the median income (eligible for Title XX day care services). An on-site review of two programs' waiting lists indicated that one out of each ten to fifteen children for whom Title XX day care is requested are ever able to receive a space. These figures indicate that there are families highly motivated to become self-supporting but hampered by lack of affordable child care.*

*Income eligible users of Title XX pay 8.6 to 10.75 percent of their income as day care fees, but this is still less than the full cost of the cheapest day care ($130).

There is a proposed bill in the United States Legislature (DCCD Reports, 1981) which, if passed, would allow credit for day care payments (up to $1200 per child depending on the cost and family income) when income tax returns are filed and give employers tax credits for subsidizing employees' child care. This will benefit those families with enough money to pay for day care up front and those with skills that are in high demand. It is doubtful that it will help poor families who do not have enough money to pay for day care in the first place. Since the poor seldom have skills that are in high demand, employer subsidizes are also less likely to be offered to them.

It seems to make good sense for governmental and other entities to subsidize day care for low income families. It is needed to enable families to become self-supporting; it helps children become more competent individuals and better citizens; and it is the one social service on which the potential monetary return in saving and revenue generation is greater than the original expenditure.

Summary

Developmental day care is cost effective, beneficial to children and necessary. The need for it continues to be greater than for other types of early childhood education programs (Note 3). With better informed and more unified support it can meet the needs of families and children at a reasonable cost. However, low income families will continue to need direct subsidies to afford adequate care for their children. When the cost benefits are considered (potentially greater than the cost of the service), it is disgraceful that day care is not available to all children who need it--that there are young children left unsupervised while their parents work.

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Attachment A

GLOSSARY

AFDC - Aid to families with dependent children in the form of monetary grants. Authorized under Title IVA of the Social Security Act.

AFDC income disregard - The deduction of certain work expenses, such as the cost of day care, in the computation of a person's income when determining AFDC benefits.

Caregiver - A person who provides direct care to children in a day care setting.

Child-staff ratio - The ratio of the number of children in a group to the number of caregivers assigned to the group.

Day care - care provided to a child outside the child's home by a person or persons outside the child's immediate family. It is for less than 24 hours a day (usually 9-14 hours) and may have characteristics identical to pre-school or nursery school programs.

Day care facility - The place where day care is provided to children.

Day care provider - An individual, organization or corporation that provides day care services.

Developmental day care - Day care services which include a program comprised of the activities, materials and qualified staff necessary to support the cognitive, social, emotional and physical development of the children in care. May also include services to and involvement of the children's families.

EPSDT - An element of the Medicaid program that provides early screening and periodic diagnosis and testing services for AFDC recipients and other needy children for the purpose of detecting potentially disabling health problems.

Economically disadvantaged - Describes individuals from low income families. There may be associated other factors, such single parent homes, limited education, unemployment and geographic area.

High-risk - Used by Belsky and Steinberg as synonymous with economically disadvantaged. Elsewhere in this paper it is used to describe the combination of economic disadvantage with potential or actual educable retardation.

Latchkey children - Children with no one to care for them during the hours their parents or guardians work. Usually refers to children 6-12 years old but may include younger children, especially younger siblings of schoolage children.

Licensing - The granting by a State of a license or permission to operate a day care facility. Providers must show evidence of compliance with the State's licensing code, standards or minimum requirements.

Median income - The level of income in a State that represents the level below which half of the incomes of households fall.

Minimum wage - The lowestwage per hour permitted by Federal law in industries governed by the Fair Labor Standards Act. Applies to day care employees.

Preschool - Applies to programs for children (age 6 years) who have not yet entered first grade.

Schoolage children - Children ages 6 to 14 years.

Title IVA - A title of the Social Security Act. It covers some social services and payments to AFDC recipients. Prior to 1975 it covered most of the social services currently under Title XX in Texas.

Title XX - A title of the Social Security Act which provides funds for social services.

WIN - The work incentive program designed by the Federal government to help AFDC recipients become self-supporting by providing training, job placement, employment and related services. Participation is mandatory for parents of schoolage children.

Attachment B

SAMPLE CALCULATION OF FICA PAYMENTS GENERATED BY DAY CARE

Factors used in calculations

$3.35	Minimum wage.
3.75	An arbitrary 1/2 of the 7.5 dollars generated in goods and services for each dollar of salary by ripple effect (Freis and Miller, 1980; Liston and Van de Ven, 1976).
1.45	Estimated number of children per parent (Begley and Liston, 1975)
.133	6.65% employee paid FICA plus 6.65% employer paid FICA.

Center Number 1*

35 children ages 3 through 5 years

Unit rate (TDHR) of $6.53 per full day of care

Total budget - $89,019

Total salaries - $59,685

$3.35 x 40 hours x 52 weeks = $6968 annual salary

35 ÷ 1.45 = 24 parents

$6968 x 24 = $167,232 parent salaries

59,685 staff salaries

226,917

x 3.75

$850,938.75 ripple effect salaries

226,917

$1,077,885.75

.133

$143,354.81 FICA payments generated

$143,354.81 ÷ $89,019 = 161% percent of program cost generated

Center Number 2*

38 children ages 0 through 5 years

Unit rate (TDHR) of $10.79 per full day of care

Total budget - $208,258 (subsidized by a college)

Total salaries - $145,152

38 ÷ 1.45 = 26 parents

$6968 x 26 = $181,168 parent salaries

145,152 staff salaries

$326,320

x 3.75

$1,223,700 ripple effect salaries

326,320

$1,550,020

x .133

$206,152.66 FICA payment generated

$206,152.66 ÷ $208,258 = 99% percent of program cost generated

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*Budget information taken from two randomly selected Texas Department of Human Resources (Title XX) Contracts.